

ABSTRACT

A device and method for correcting for timing jitter of an optical data pulse in an optical transmission system. During transmission, a data pulse may suffer jitter. Its arrival time at a node may be temporally offset from its predicted arrival time. Data pulses are timed so that they may be received at a detector disposed downstream of the node at a predetermined time. The device includes a source of chirped optical pulses and a node, which has a first input arranged to receive a chirped optical pulse. The node has a second input arranged to receive a data pulse. The node includes an optical gate arranged to generate an output pulse in response to the first pulse and the data pulse received at the first and second inputs, respectively, having a wavelength dependent upon the time at which the data pulse is received at the second input. The device further includes an optically dispersive medium after passage through which, the output pulses are correctly retimed in order to correct for the timing jitter.